[54] SPEECH RECOGNITION

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[58] Field of Search 381/43, 42

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[57]   ABSTRACT

In a speech recognition system disclosed herein, acoustic speech waveforms are initially analyzed to obtain, at successive sample times, digital frames of speech information. This initial analysis may, for example, be performed by multi-channel filtering or linear predictive encoding. Stored in the apparatus is a list of representative standard frames, represented by coded indices, together with a table of difference values which represent the vector distances between each standard frame in the list and all other standard frames. For each token (vocabulary) word which is to be recognized, there is stored a sequence of standard frame indices which represent that token word. As each sample frame is generated, a representative standard frame is selected which best represents the sample frame. The difference values which pertain to the representative standard frame are then scanned for all frames defining all token words and, during the scanning, an accumulated value corresponding to each possible matching pair of token frame and sample frame is incremented by a function of the appropriate distance value and the new accumulated value is stored. On the basis of the relative values of the various accumulating values, token words can then be matched to the sample speech.

3 Claims, 5 Drawing Sheets